

STATE OF MAINE DEPARTMENT OF CONSERVATION

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IDM Home Page: http://www.maine.gov/doc/mfs/idmhome.htm

Forest & Shade Tree - Insect & Disease Conditions for Maine September 25, 2009

Introduction

This will be the final issue of the *Forest & Shade Tree – Insect and Disease Conditions Report for Maine* for the 2009 season. It has been a quite an unusual year weather-wise, with an overabundance of rain in May, June, and July, and a very dry late August and September. Despite the occurrence of several leaf and needle diseases that were intensified as a result of the wet weather and the continuing threats posed by exotic insect pests, including those near our borders or already present in Maine, the general forest condition statewide is judged to be quite healthy and ready to enter the winter season. During the fall and winter months our activities will continue to focus on these serious and threatening insect and disease pests in addition to several of our native pest problems. We greatly appreciate all the assistance provided to us in locating and describing the forest insect and disease conditions that you have experienced in the field. Without all your observations, our knowledge of forest conditions would be substantially limited. We hope you have found the information in these *Conditions Reports* useful, and look forward to serving you again next spring. In the interim have a safe, enjoyable and comfortable fall and winter season.

Insects

Cherry Scallop Shell Moth (*Rheumaptera prunivorata*) – The nests formed by the larvae of the cherry scallop shell moth are more abundant this year but not at outbreak levels. The larvae web leaves together near the ends of branches on black cherry trees and then feed gregariously within the nests. They add more leaves to the nest as they feed. Both the larvae and moths are quite striking. The larvae are black with four white stripes on the back, yellow underneath and have orange heads and are just finishing up feeding now. The moths will emerge next summer and lay eggs on the leaves of cherry trees. An egg parasite is reported to keep the population under control in most years.

Elongate Hemlock Scale (*Fiorinia externa*) – Homeowners in Kennebunkport noticed the hemlocks they had planted about 8 years ago were looking ragged. They initially attributed it to the excess moisture we've had this summer; however close inspection revealed strange things covering the undersides of the needles. A sample was submitted to Cooperative Extension, and the problem was subsequently determined to be elongate hemlock scale. It most likely was on the central tree in the planting when the trees were initially planted. Since the initial detection a second infestation has been reported on native and planted hemlock and balsam fir in Kennebunk.

These are the first records of established elongate hemlock scale in Maine and containment measures are underway for hosts within approximately 750 feet of the plantings. Primary hosts include hemlock and true firs

(including balsam and Fraser); second tier hosts include spruces and other conifers, with the exception of pine. The detection of this insect in close proximity to hemlock woolly adelgid is troubling because the two together cause rapid decline of hemlock hosts. In addition, this pest can be a severe problem in Christmas tree plantations.

As with hemlock woolly adelgid, this insect can be transported by wind, birds, and just about anything that moves. The crawlers are tiny, about 0.2 mm long, and are active from early spring to the first hard frost. The insect is not able to complete a second generation in New England at this time (this could change with adaptation and climate warming). People can reduce the chances of elongate hemlock scale and hemlock woolly adelgid from becoming established in their trees by taking down their birdfeeders between the first of April and the last of August and by trimming host foliage that is likely to come in contact with animals and vehicles that could be carrying the crawlers of these insects. As with hemlock woolly adelgid, the climatic range of this insect seems to be limited to a ten to twenty mile band along the coast, and inland up the rivers.

Look for signs of elongate hemlock scale in planted hemlock and fir and in natural hemlock stands already affected by hemlock woolly adelgid. Please report any suspect findings to the Lab. Pictures and more information about elongate hemlock scale can be found at www.maineforestservice.gov/EHS.htm or a hardcopy pest alert can be requested from the Lab.

Leafhopper Damage to Balsam Poplars and Willows – Balsam poplars in the towns of Bangor, Bradford, Winterport, and Frankfort have received significant leaf damage, caused most probably from the feeding of an unidentified species (or possibly several species) of leafhopper insects. Several genera and species of leafhoppers have been reported to feed on balsam poplar, and the typical damage is seen as a leaf bronzing and browning. The damage is sometimes referred to as "hopperburn." On magnification, the leaf feeding appears as thousands of tiny "craters" on the undersurface of the leaf.

The "graying", browning and early defoliation of native willows along waterways throughout central and southern Maine also appears to be from leafhopper damage. In the past the early browning of willow foliage was caused by the **Imported Willow Leaf Beetle** (*Plagiodera versicolora*). But close examination this year indicates that the majority of the damage is from the same stippling on the undersides of the leaves as was seen on the balsam poplar. There is some leaf beetle skeletonizing but it is minor compared to the damage caused by the tiny leafhopper punctures all over the leaves. The insects are gone now so we will have to follow up on this one next year. Leafhoppers thrive in a moist environment so between the willows lining waterways and the wet June and July it looks like the tree were set up for an infestation.

Introduced Pine Sawfly (*Diprion similis*) – The larvae of the second generation of the introduced sawfly is feeding on pines now. The larvae are marbled black, white and yellow and blend in well with the twigs and foliage. These sawflies are found most often on white pine in Maine but they will feed on other pines as well. The brown oval cocoons can often be found on the needles and twigs of any trees in the area. Parasites and cold winter temperatures usually combine to keep populations from getting out of hand.

Oak Slug Sawfly (*Caliroa annulipes*) – This insect is not usually a problem in Maine but a stand of red oak in Jefferson had moderate damage from this sawfly. The larvae skeletonize the leaves – not eating any of the veins and creating a very lacy feeding pattern over the entire surface of the leaves. They feed gregariously and work from the top of the tree down. Trees infested with these larvae had no green leaves at the top of the tree and almost perfect looking leaves at the bottom.

Diseases and Injuries

Birch Anthracnose (*Septoria betulae*; *Discula betulina*) – Some moderate to heavy damage to paper birch leaves from birch anthracnose fungi has been reported from the northwestern Maine region. Following a line from approximately Rangeley to Greenville, and points to the northwest of that line, crowns of birches have browned, and early leaf drop has been seen. The disease will be of little significance to long-term tree health, but some of the foliage will appear dulled, and the crowns may appear thin or bare for the foliage-viewing season. Paper birches in other regions of the state do not appear to have been seriously affected this year.

Fir-Fern Needle Rust (*Uredinopsis* spp.; *Milesina* spp.) – Heavy fir-fern rust infection on balsam firs has been observed in several townships to the west Moosehead Lake. Most of the affected trees were nearby or bordering roadways where the mowed right-of-way shoulder supports heavy fern growth. Only a few reports of this disease have come from Christmas tree growers this year. Fir-fireweed rust (*Pucciniastrum epilobii*) was also noted from the Bigelow Preserve area. Fir-fireweed rust is likely prevalent throughout many northern and western Maine townships where fireweed is common in recent clear-cut or other heavily disturbed habitats.

Red Pine Shoot Blight (*Sirococcus conigenus* and *Diplodia pinea*) - Both of these red pine pathogens occur throughout the state. The most recent infections to be diagnosed were found in the central (T3ND) and Downeast (T29MD) regions. Symptoms and signs of these pathogens are difficult to distinguish from each other in the field, and it is known that both pathogens often occur together in the same stand and on the same trees. It is believed that both diseases have been causing more significant damage recently, probably as a result of the wet weather pattern that has occurred for several consecutive years.

Residual Stand Damage and Post-Logging Decline - Residual stand damage resulting from injuries made during harvesting activities continues to be a problem in many woodlots. Most recently, an oak and ash stand in Hope was examined in which there has been significant tree decline caused by harvesting injuries inflicted approximately eight years ago. Both oaks and ashes have sustained significant mortality, and many remaining trees are declining. Infection by the root rot pathogen, *Armillaria* spp., was common on the declining trees.

Tar Leaf Spot of Norway Maple – An Update (*Rhytisma acerinum*) – This disease received a great deal attention this year as it was very prevalent and caused significant aesthetic damage to Norway maples in many towns and residential areas throughout the state. In an earlier *Conditions Report*, notation was made that the trees would not re-foliate this season. Re-foliation is the development of a new, second set of leaves during one season. Re-foliation late in the season can significantly reduce the energy reserves of affected trees. Trees that re-foliate are at higher risk of winter injury and subsequent crown dieback. This past week, a trace level of re-foliation has been seen on some Norway maple trees in the greater Bangor area. Although this is not a good sign, the level of re-foliation has been very low, and is still not expected to seriously jeopardize tree health. However, there may be some small twig or branch dieback on some trees next spring.

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